



Giant epidermal cyst of the upperarm: A rare case report

Giant epidermal kist

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Abstract

Subcutaneous epidermal cysts are commonly related to the scalp, face, neck, trunk and back. Fewer than 10% is seen in the extremities at any age and more common in men. Epidermoid cysts are benign, 3-20 mm in diameter and usually asymptomatic until they become infected or have become enlarged enough to cause damage to adjacent anatomic structures. The histopathological examination is the gold standard of diagnosis for epidermoid cyst, and surgery of complete excision is the first choice of treatment methods. The present case report is a 36 years old male with a giant epidermal cyst in the upper arm which grew to an extremely large size for >20 years without inflammation or rupture. The patient presented with discomfort and insomnia due to compression from the extremely large tumor. The patient underwent excision of the cyst. At the follow-up examination 2 years postoperatively, there was no local recurrence and discomforting symptoms.

Keywords

Giant Epidermoid Cyst; Upper Arm; Insomnia

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Introduction

Epidermal cysts are intradermal or subcutaneous tumors contained within the epidermis. They are formed as a result of invagination of keratinized squamous epithelium [1]. Subcutaneous epidermal cysts are commonly related to the scalp, face, neck, trunk and back: fewer than 10% seen in the extremities which especially occur as a result of epidermal structures entering into the dermis and usually settle on the fingers, palms, and the soles of the extremities [2,3]. A conventional epidermal cyst is usually small, solitary and an epidermal cyst with a diameter of 5 cm or rarely more [4]. On the other hand, a number of authors have previously reported giant epidermal cysts with diameters >5 cm but none of them is in any site of extremities [5,6]. Herein, we have reported the clinical presentation of a giant epidermoid cyst in the upper arm, which grew to an extremely large size for >20 years.

Case Report

A 36-year-old man presented to the Department of Orthopedics Surgery in our hospital with a right upper arm mass, which had been slowly growing for 20 years. There was no history of trauma or any previous surgery. Physical examination revealed that the mass was located as subcutaneously well defined, soft, movable and painless. The patient presented with discomfort and insomnia due to compression from the extremely large tumor.

Magnetic resonance imaging (MRI) revealed a large encapsulated, homogeneous, well-defined and oval mass measuring 10×8, 6×6 cm in the diameter of right upper arm. The lesion had low signal intensity on T1-weighted images, while on T2-weighted images; its signals were hyper intense relative to the muscle (Figure 1). There was no enhancement of the lesion after intravenous injection of contrast solution.

The patient underwent excision of giant cyst under general anesthesia (Figure 2). The gross pathological examination showed that the mass was well-defined, nodular and cystic in nature. Histopathological examination showed that the epidermal cyst

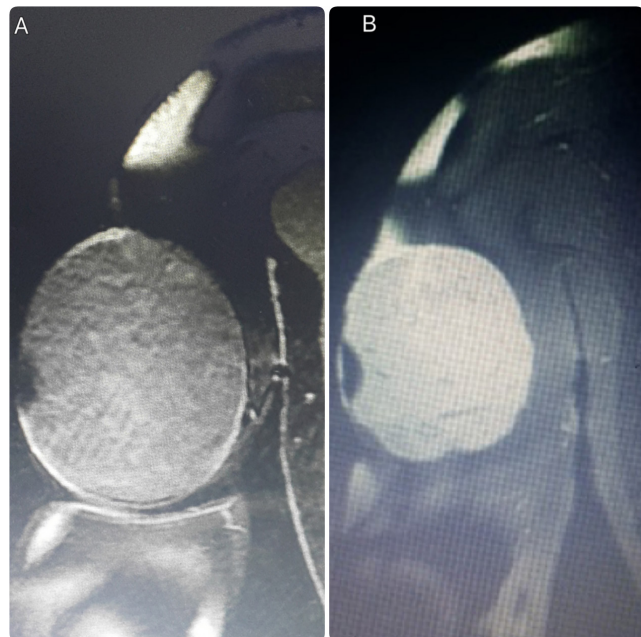


Figure 1. The lesion had low signal intensity on T1-weighted images (a), T2-weighted images; its signals were hyper intense relative to the muscle (b).



Figure 2. The patient underwent excision of giant cyst under general anesthesia.

wall had a thin layer of benign stratified squamous epithelium with keratohyalin granules and the lumen of cyst was filled with lamellated keratin debris (Figure 3). The pathologic diagnosis was keratinous cyst (epidermoid type).

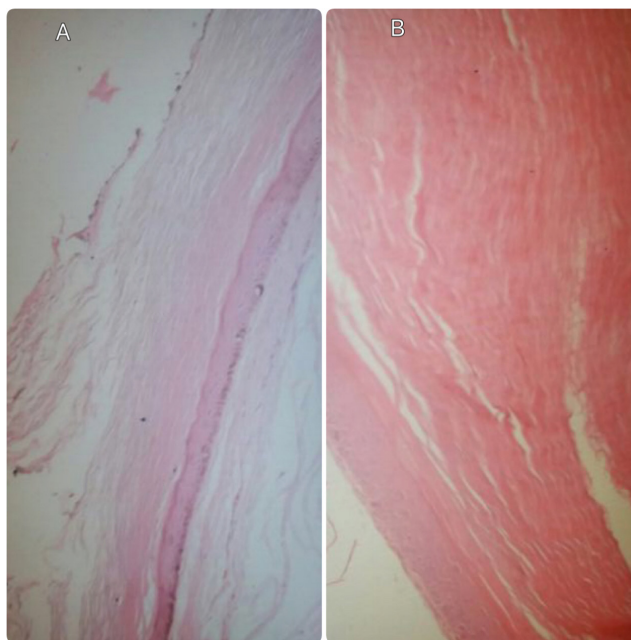


Figure 3. Histopathological examination showed that the epidermal cyst wall had a thin layer of benign stratified squamous epithelium with keratohyalin granules and the lumen of cyst was filled with lamellated keratin debris.

At the follow-up examination two years postoperatively, there was no local recurrence of the lesion (Figure 4).

The patient gave informed written consent.

Discussion

Subcutaneous epidermal cysts are commonly related to the scalp, face, neck, trunk and back: fewer than 10 % seen in the extremities which especially occur as a result of epidermal structures entering into the dermis and usually settle on the fingers, palms, and the soles of the extremities [2,3]. Cysts on the acral surfaces of the skin are considered to arise from the implantation of epidermis into the dermis through trauma. These cysts usually grow through the accumulation of epithelial and keratinous debris [6,7]. The epidermoid cyst of our case is located in the upper arm but the patient had no trauma or injection history.



Figure 4. At the follow-up examination two years postoperatively, there was no local recurrence of the lesion.

A conventional epidermal cyst is most frequently seen in young and middle-aged adults [8]. It is usually a slow-growing mass ranging in size from a few millimeters to a few centimeters [4]. However, a giant epidermal cyst bigger than 5 cm in diameter is rare [8]. In our case, the epidermal cyst was 10x8, 6x6 cm sized and the patient was 36 years old. Giant epidermal cyst occurring in the upper arm and this period of life, such as in our case, has rarely been reported.

Although an epidermal cyst with a diameter ≥ 5 cm is rare, it may act like locally aggressive and turn into a malignant tumor in this situation. The development of squamous cell carcinoma in epidermal cysts is rare and few cases have been reported [9]. In a proliferative epidermal cyst, epithelial proliferation from the cyst wall projects into the lumen [9]. Generally, squamous cell carcinomas in epidermal cysts have a low malignant potential [9]. In spite of 10x8, 6x6 cm cyst, no malignant transformations were identified in this case.

An epidermal cyst is usually asymptomatic until it becomes infected or has become enlarged enough to cause damage to adjacent anatomic structures [8]. Hence, a giant epidermal cyst may produce adverse pressure effects on surrounding structures. In our case, the lesion was found to be localized more deeply into the dermis and subcutaneous level, and presented with pressure effects by the giant epidermal cyst.

In conclusion, the present case demonstrates that giant epidermal cysts may grow for long durations of time and produce adverse effects due to the pressure exerted on surrounding structures and serious problems that may require medication such as insomnia. Therefore, surgical excision is recommended for giant epidermal cysts.

Scientific Responsibility Statement

The authors declare that they are responsible for the article's scientific content including study design, data collection, analysis and interpretation, writing, some of the main line, or all of the preparation and scientific review of the contents and approval of the final version of the article.

Animal and human rights statement

All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. No animal or human studies were carried out by the authors for this article.

Conflict of interest

None of the authors received any type of financial support that could be considered potential conflict of interest regarding the manuscript or its submission.

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